

Dart Hawkesbury 1270 Aberdeen St Hawkesbury, ON K6A 1K7 Canada Tel (613) 632-5200

PO No	Supplier	Line Item No	Rel No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Container No	Status	Receive Date	Price/Un
O039156	ACI001-VC	1	1	Net 30	MT-HRS-P-0.500	Hot Rolled Steel Plate 0.500™ (44W) receive sf				32	3/7/2018	32	Manager of the Control of the Contro	\$048042	Stock	3/5/2018	\$ 13.17 / sf
		2				6061T6 Bar 0.500 X 0.500 : MATERIAL: 6061- T6/T651/T6510/T6511/T62 ALUMINUM BAR PER QC-A-225/8 OR AMS-QQ- A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ- A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive fi				12		20		S048043 (Stock	3/5/2018	\$ 0.86 / ft
		5				Hot Rolled Steel Plate 0.250"" (44W) : Hot Rolled Steel Plate 0.250"" thick				32		32	4	S048044 P	Stock	3/5/2018	\$ 6.33 / ft
		6			4stm	AISI 4140 Quenched & Tempered Steel Round Bar 1.750"* Dia.: AISI 1140 Q&T Round Bar : MAT'L: AISI 4130 QUENCHED & TEMPERED ROUND BAR AS PER ASTM 4140 QT DR ASTM 4142 QT				12		12		S048045	Stock :	3/5/2018	\$ 18.08 / ft
		8		M		1140 Steel Round Bar 0.750"" receive ft						12		5048046	Stock 3	8/5/2018	2.49 / ft
									Total:	100		100					

Plex 3/5/2018 4:14 PM Dart.Dubois.Pascal

DELIVERY - CLIENT

Copy C000076601

	ACTER OUT I FITTE THE	THO					
	935, Boul. du Hâvre		Customer No	7	CL10001056		
	Salaberry de Valleyfield (Québec) J6S 5L1)uébec) J6S 5L1	Date	er o	2018/03/01		
	Fax: 450-377-5696 Mtl: 5	Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242	Delivery date	te	2018/03/05)5	
			Your order No	N°	039156		
DART AEROSPACE LTD	Shipped to		Processed by	у	Josianne Bourdon	rdon	
1010		*	Salesman				
HAWKESBURY, Ontario, K6A 1K7	, Ontario,		Carrier		OUELLETTE VALLEYFIELD	ALLEYFIELD	
	Att : CHANTAL LAVOIE Tél.: 613-632-5200	Tél.: 613-632-5200	Credit Terme	le	Net 30 Days		
Instruction F-M	Delivery Route	5	Page		1		
Product Description	Weight	Qty U/M	CMD EXP	B/O	IN I	Internal Use Only I S C	TUO
1 PLATE 44W 1/2 (4 X 8) P44-1248 4059	652.80	32.00 PI2_\$CLB	2×		12		
2 X 4' X 4 HEAT : 724995 20100410 COUPE AU FEU 3		1.00 UN	11XH		MAR 0 4 2018	78	
				\$ \$0			í
		7					
			10				
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All sold and delivered materials remain the property of "Acier Ouellette Inc" until payment is made in full, complete and cashed. All lost materials are at the buyer's expense. The warranty offered by "Acier Ouellette Inc." is the same as offered and honored by the manufacturer and his warranty is transferred by "Acier Ouellette Inc." to the client. The buyer hereby accepts to respect the following conditions: Net 30 days from billing date and the buyer accepts to pay administration charges of 2% per month (24% per annum) on all past due amounts over 30 days. Any default in respect with this contract will lead to payment by acceleration and permits to the seller, at his choice to claim for the balance due or the repossession of the goods sold. All claims must be made within five (5) days with this document enclosed. Any merchandise that has been damaged, cut or modified cannot be returned. All goods returned must be with our authorization and are subject to a 25% restocking charge.

Customer's Signature

Total Weight (Lbs): 652.80

NIR: R-109516-6

Total (\$CAD)

Conditions:

Prepared By :

1011-61		CETEIN	CC000000000000000000000000000000000000
3113113110	ACIEK OUELLETTE INC. 935, Boul. du Hâvre	Customer N°	CLI0001056
ac ac	Salaberry de Valleyfield (Québec) J6S 5L1 Tél · 450-377-4248 MH· 514.236.4748 E-v · 900.667 7249	Date	2018/03/01
	Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242	Delivery date	2018/03/05
		Your order N°	039156
Billed to DART AFROSPACE ITD	Shipped to	Processed by	Josianne Bourdon
1270 ADEDNESN CT		Salesman	
1270', ABEKDEEN ST. HAWKESBURY, Ontario, K6A 1K7	, Ontario,	Carrier	OUELLETTE VALLEYFIELD
	Att : CHANTAL LAVOIE Tél.: 613-632-5200	Credit Terme	Net 30 Days
Instruction F-M	Delivery Route 5	Page	1
Product Description	Weight Qty U/M	PCS NB	Use Only
ALU 1/2 6061-	3.60 12.00 PI_\$CLB	3	0 0 0
1 X 12' HEAT: 33931		702	9-6 8-82 8-82
2 PLATE 44W 1/4 (4 X 8)	326.40 32.00 PI2_\$CLB		7.96.0
P44-1448 4074		XX	7,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1
2 X 4' X 4' HEAT: W7G550		14,14	4'X20' V Sxtx4'
SHEAR CUT	1.00 UN		DAS MAR 84 2018
			0.80
3 KOUND 4140 HEAT 18/4 (R) * R4140-134H	98.14 12.00 PI_\$CLB		7
1 X 12 HEAT: 75069193		, ZIX	11/19'3" 1717"
			×
			5-39 MAR 0 4 2018
-			

CO0007659

Copy

DELIVERY - CLIENT

NIR: R-109516-6

10/2/19/11	DELIVERY - CLIENT	CLIENT		Q	Copy	CO0007659
10/1/4/1/1-10/-	ACIER OUELLETTE INC.	Customer N°		CLI0001056		
00 miles	eld .	Date		2018/03/01		
	Tel.: 450-377-4248 Mtl: 514-336-4248 EXI.: 800-567-4248 Fax: 450-377-5696 Mtl: 514-336-4246 EXI.: 866-456-4242	Delivery date		2018/03/05	/05	
		Your order N°		039156		
	Shipped to	Processed by		Josianne Bourdon	urdon	
		Salesman				
1270 , ABERDEEN ST. HAWKESBURY, Ontario, K6A 1K7	, Ontario,	Carrier		OUELLETTE VALLEYFIELD	VALLEYFI	ELD
d	Att: CHANTAL LAVOIE Tél.: 613-632-5200	Credit Terme		Net 30 Days	10	
Instruction F-M	Delivery Route 5	Page		2		
acitainos O tomboro	4	PCS NB	~	ıI	Internal Use Only	e Only
	אפוטור עני סיוא	CMD EXP	B/0	IN	ISC	TUO
COUPE A LA SCIE SCIE 1	1.00 UN					
1 X 12' R/L/HEAT: M525/4		~ 2	*	1×30+	×	3/1 1/4
Conditions	Total Weight (Lbs): 446.16 NI	NIR: R-109516-6				
All sold and delivered materials remain the property of "Acier Quellette Inc" until payment is made in full, complete and cashed. All lost materials are at the buyer's expense. The warranty offered by "Acier Quellette Inc." to the client. The buyer hereby accepts to respect the "Acier Quellette Inc." is the same as offered and honored by the manufacturer and his warranty is transferred by "Acier Quellette Inc." to the client. The buyer hereby accepts to respect the following conditions: Net 30 days from billing date and the buyer accepts to pay administration charges of 2% per month (24% per annum) on all past due amounts over 30 days. Any default in respect with this contract will lead to payment by acceleration and permits to the seller, at his choice to claim for the balance due or the repossession of the goods sold. All claims must be made within five (5) days with this document enclosed. Any merchandise that has been damaged, cut or modified cannot be returned. All goods returned must be with our authorization and are subject to	t is made in full, complete and cashed. All lost materials are at the buyer's expense, arranty is transferred by "Acier Ouellette Inc." to the client. The buyer hereby accepration charges of 2% per month (24% per annum) on all past due amounts over 30 at his choice to claim for the balance due or the repossession of the goods sold. All ced, cut or modified cannot be returned. All goods returned must be with our author	e. The warranty offered by apts to respect the 30 days. Any default in I claims must be made orization and are subject to		w)		
a 25% restocking charge.						

Total (\$CAD)

Customer's Signature

Verified By :

Prepared By:



Dart Aerospace Ltd. 1270 Aberdeen St Hawkesbury, ON K6A 1K7 Canada

Tel (613) 632-5200

PURCHASE ORDER PO039156

Supplier: ACI001-VC

Ship To:

Acier Ouellette Inc. 935 Boul. Du Havre

Valleyfield QC

ON

J6S 5L1 Canada Phone: 800 667 4248 Fax: 450 377 5696

1270 Aberdeen Street Hawkesbury

Phone: 613-632-5200

K6A 1K7 Canada

PO No:

PO039156

PO Date:

3/1/18 3/7/18

Due Date:

Purchase Order Revision:

Revision Date: Ship-To Contact:

Lavoie, ChantalPhone:

clavoie@dartaero.com

Via:

Ground

Pymt Terms:

Net 30

Freight Terms:

Special Comments: quote no: sou0088895, sou0088998

			Items	\$						
Line Item	Part	Supplier Part No		Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	MT-HRS-P-0.500	To produce the convenience of th	Hot Rolled Steel Plate 0.500" (44W) receive sf	Firmed	3/7/18	32 sf	32°sf		\$13.167187/sf IAR () 5 2018	51 29
Line Item Note	note: please cut sheet in t	two	and the state of t	description of the second	E-market (sector land)	Acres energines a sur-			and the second second second second second second	1 9-00
2	M6061T6B0.500X00.500		6061T6 Bar 0.500 X 0.500 : MATERIAL: 6061- T6/T651/T6510/T6511/T62 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ- A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ- A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft	ĺ	3/7/18	12 ft	20 20) 12 ft	\$0.8575/ n IR 0 5 20 18	\$10.29 DAS 11 9.89
3	MT-4140-B-2.250X8.000		AISI 4140 Steel Bar: Material: AISI 4140 STEEL BAR AS PER ASTM A29, AMS 6349, AMS 6382, AMS 6529, MIL-S-5626 MIN. ROCKWELL C = 28 RC MAX. ROCKWELL C = 32 RC NOTE: cut material in 12" lenght	Firmed	3/16/18	6 ft	Oft	6 ft	\$153.73166/ft	\$922.39

Line	T	Supplier			Due	Order	Received		Unit	Extende
Item	Part	Part No	Description	Status	Date	Quantity	Quantity	Balance	Price (CAD)	Price
4	MT-4140-B-0.500x3.500		4140 Steel Bar 0.500 X 3.500 : AISI 4140 STEEL BAR PER ASTM A29, AMS 6349, AMS 6382, AMS 6529, MIL-S-5626 MINIMUM ROCKWELL C = 28 RC MAXIMUM ROCKWELL C = 32 RC receive ft	Firmed	3/7/18	6 ft	0 ft	6 ft	\$27.50/ft	\$165.0
5	MT-HRS-P-0.250		Hot Rolled Steel Plate 0.250" (44W) : Hot Rolled Steel Plate 0.250" thick	Firmed	3/7/18	32 ft	32,24	32 ft	\$6.33188/ f t MAR 0 5 201	DAS
e Item No	te note: please cut sheet in t	wo	THE BOOK OF THE PARTY STATE AND ADDRESS AND SHOULD SEE THE STATE OF TH		en discontinui fin la sale, prin sale e d	han is not as an assume the d	and the second s	_	The second secon	Martin St., States and States St., and St., and St., and St.
6	MT-4140QT-R1.750		AISI 4140 Quenched &Tempered Steel Round Bar 1.750" Dia. : AISI 4140 Q&T Round Bar : MAT'L: AISI 4130 QUENCHED & TEMPERED ROUND BAR AS PER ASTM 4140 QT OR ASTM 4142 QT	Firmed	3/7/18	12 ft	12'	12 ft	\$18.07666/ft MAR 0 5 20	\$216.92 18 DAS 9-89
7	MT-4140QT-R2.375		MT-4140 QT-R2.375 : MAT'L: AISI 4130 QUENCHED & TEMPERED ROUND BAR AS PER ASTM 4140 QT OR ASTM 4142 QT	Firmed	3/7/18	12 ft	O ft	12 ft	\$46.6666/ft	\$560.00
8	M4140N-R0.750	and the second	4140 Steel Round Bar 0.750" receive ft	Firmed	3/7/18	12 ft	12	12 ft MA	\$2.4925/ft R 0 5 2018	\$29.91 DAS
9	M6061T6S2.250X13.500		6061-T6 Sheet 2.250" Thick x 13.500" Wide : MATERIAL: 6061-T6/T62 ALUMINUM SHEET AS PER QQ-A-250/11 OR AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209	Firmed	3/7/18	6 ft	O ft	6 ft	\$171.315/ft	\$1027-189

Order Notes

Plex 3/2/18 8:40 AM dart.lavoie.chanta

Grand Total: \$3,556.37

Order Notes

Procurement Quality Clauses

A005 right of entry

A012 chemical and physical test report

A016 personnel qualification

A017 raw material identification (as applicable)

A026 certification of material conformance

A041 quality management system

A042 dart notification by supplier

A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 3/2/18 8:40 AM dart.lavoie.chantal



ACIER OUELLETTE INC.

935, Boul. du Hâvre

Salaberry de Valleyfield (Québec) J6S 5L1

Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248 Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

Quotation

SOU0088998

Billed to

DART AEROSPACE LTD

1270, ABERDEEN ST. HAWKESBURY, Ontario, K6A 1K7

Shipped to

, Ontario,

Att: CHANTAL LAVOIE Tél.: 613-632-5200

Customer Nº

CLI0001056

Date

2018/02/27

Revision Nº

0

Prices valid until

2018/03/06

Your Order No

Processed by

Josianne Bourdon

Salesman

JOSIANNE

Carrier

OUELLE SDV

Credit Terms

Net 30 Days

Page

1 /

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	l° and description	Weight	Qty	U/M	Qty	U/M	Price	Pcs Nb	Price	Amoun
PLATE 44W 1/2 (4)		652.80	32.00	PI2_\$CLB	1.0	O UN		2.00	210.675	421.35
P44-1248	4059				,			10075,09276000		
2 X 4' X 4' STOCK										
COUPE AU FEU			1.00	UN	1.0	0				
FEU	3									
SURCHARGE ENERG				\$						3.95
	FRAIS_ENERGETIQUE									
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Total Weight (Lbs)

652.80

Important

This offer is based on availability and current pricing conditions that may be revised upon reception of the order.

This offer is subject and conditional to credit approval.

Approuved and Accepted by:

Date :

Sub-total

425.30

TVH-13 · · 55.29

Total (\$CAD)

480.59



ACIER OUELLETTE INC.

935, Boul. du Hâvre

Salaberry de Valleyfield (Québec) J6S 5L1

Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248 Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

Quotation

SOU0088895

Billed to

DART AEROSPACE LTD

1270 , ABERDEEN ST. HAWKESBURY, Ontario, K6A 1K7

Shipped to

, Ontario,

Att: CHANTAL LAVOIE Tél.: 613-632-5200

Customer N°

CLI0001056

Date

2018/02/27

Revision N°

0

Prices valid until

2018/03/06

Your Order No

Processed by

Josianne Bourdon

Salesman

JOSIANNE

Carrier

OUELLE SDV

Credit Terms

Net 30 Days

Page

1

Product N° and description	Weight	Qty	U/M	Qty	U/M	Price	Pcs Nb	Price	Amour
SQUARE ALU 1/2 6061-T6 *	3.60	12.00	PI_\$CLB	12.00	PI		1.00	10.290	10.29
CAL-12 1778									_
1 X 12' STOCK						15-461			: 8575
ALU PLATE 2 1/4 6061-T651 RANDOM	433.76	13.50	PI2_\$CLB	13.50	PI2		2.00	1 027.890	2 055.78
PAL-2146061-V 7464	1								
2 X 13 1/2" X 72" 3-4 DAYS									171.31
PLATE 4140 H.T. 1/2	0.00	1.00	UN	1.00	UN		1.00	165.000	165.00
N									~-/
1 X 3 1/2" X 72" 7-10 DAYS									712
PLATE 44W 1/4 (4 X 8)	326.40	32.00	PI2_\$CLB	1.00	UN		2.00	101.310	202.62
P44-1448 4074 2 X 4' X 4' STOCK									
	1								4.33/87
SHEAR CUT		1.00	UN	1.00					4.0
SHEAR 2	-								
ROUND 4140 HEAT TREAT 1 3/4 (R) * R4140-134H 4911	98.14	12.00	PI_\$CLB	12.00	PΙ		1.00	216.920	216.9
R4140-134H 4911 1 X 12' STOCK									
COUPE A LA SCIE		1 00		1.00					18.0706
SCIE 1		1.00	UN	1.00					()
ROND 4140 HT 2 3/8" DIA	0.00	1.00	LIM	1.00	1.181		1.00		
N N	0.00	1.00	UN	1.00	UN		1.00	560.000	560.00
1 X 20' R/L 3-4 DAYS						1			28.00
PLATE 4140 HT 2 1/4 NS	367.56	4.00	PI2 \$CLB	4 00	JN_\$UN		1.00	922,390	922.39
P4140-214H 9352	307.50	1.00	112_4000	1.000	// _ \$014		1.00	322.330	922.33
1 X 8" X 72" 7-10 DAYS								İ	153.731
ROUND 4140 HEAT TREAT 3/4 (R) *	18.02	12.00	PI_\$CLB	12.00	PI		1.00	29,910	29.91
R4140-34H 4949			_, _				7.17.70	25.510	25151
1 X 12' R/L STOCK	ł							ĺ	0 16-2
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	1	I	1			1		I,	

Date:

Next Page...



ACIER OUELLETTE INC.

935, Boul. du Hâvre

Salaberry de Valleyfield (Québec) J6S 5L1

Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248 Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

Quotation

SOU0088895

Billed to

DART AEROSPACE LTD

1270, ABERDEEN ST.

HAWKESBURY, Ontario, K6A 1K7

Shipped to

, Ontario,

Att: CHANTAL LAVOIE Tél.: 613-632-5200

Customer N°

CLI0001056

Date

2018/02/27

Revision No

0

Prices valid until

2018/03/06

Your Order No

Processed by

Josianne Bourdon

Salesman

JOSIANNE

Carrier

OUELLE SDV

Credit Terms

Net 30 Days

Page

2

Product N° and description	Weight	Qty	U/M	Qty	U/M	Price	Pcs Nb	Price	A
SURCHARGE ENERGETIQUE			\$	4.1	0/14	FIICE	PUSIND	Price	Amount
FRAIS_ENERGETIQUE			₽						3.95
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			2.00			1			
			-						
	1								
	1					-			
TablW (at (at)									

Total Weight (Lbs)

1 247.48

Important

This offer is based on availability and current pricing conditions that may be revised upon reception of the order.

This offer is subject and conditional to credit approval.

Approuved and Accepted by:

Date :

Sub-total

4 166.86

TVH-13 · · 541.69

Total (\$CAD)

4 708.55

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-HR.5-P-0:500 DATE: MAR 0 4 2018	PO / BATCH NO.: 039156/SO 480 42
MATERIAL CERT REC'D: QUANTITY RECEIVED: QUANTITY INSPECTED: QUANTITY REJECTED:	THICKNESS ORDERED: 0.500 THICKNESS RECEIVED: 0.500 SHEET SIZE ORDERED: 44.44 SHEET SIZE RECEIVED: 44.44

DESCRIPTION	(Ch	CR eck N)	COMMENTS
SURFACE DAMAGE	Y	(N)	
CORRECT FINISH	(Y)	N	
CORROSION	Y	(N)	
CORRECT GRAIN DIRECTION	(Y)	N	
CORRECT MATERIAL PER M-DRAWING	(Y)	N.	Astm 4572
CORRECT THICKNESS	(X)	N	70,000
PHOTO REQUIRED	Y	(N)	
CORRECT REF # TO LINK CERT	(Y)	N	Heat# 724995 20100410
CORRECT MATERIAL IDENTFICATION	Y	Ν	VI THE TOTAL CONTROL TO
CORRECT M# ON THE MATERIAL	M	N	
DOES THIS MATERIAL REQUIRE			
ENGINEERING SIGN OFF	Υ	(N)	
DOES THIS REQUIRE AN		Ž	
EXTRUSION REPORT	Υ	(N)	

CUT SAMPLE PIECE OF	MATERIAL A			SS CHECK.	
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	WEBSTER

testers located in the Quality Office

QC 18 INSPECTION	COLUMN TO SECURE	ENGINEERING SIGNOFF (if required)
INSPECTED BY:_	DAS	SIGNED OFF BY: See attached
DATE:	9-89 MAR 0 4 2018	DATE:

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

Hot Rolled Steel Plate

Per MT-HRS-P

It is acceptable to receive 44W Hot Rolled Steel Plate per the manufacturer's specification ASTM A572, 300W. (Equivalent to 44W)

The MT-HRS-P drawing will be updated to reflect this.

Michael Lee

09,7600 1901

GLT DBATR VE CELTK FABRIKALARI T.A Ş STANDING 1917AL 3,500 000 000 TL SUCT, MT ERBENIR

C E R T I F I C A T E EN 10204 : 2004 TYPE 3.1 TEST

18/10/2017

DATE 18/10/20 CERTIFICATE NO :71612651

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GRAIN PRACTICE	NO	:	9		:	7023018046L010	72510620200110	72510620200310	725:0620200320	72510620600110	72510620600126	73524820100210	73524820100220	72499520100113	72459520100120	72499520100220	72499520100310	72499520100320	2	0410	RE	73524826160410	
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E MANUFACTURER; PEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE BY THE BASIC OXYCEN PROCESS AND TESTED IN ACCORDANCE WITH THE RULES OF 40 21-13 / ASTR AS72-15 303M/250M / GRSD TYPE 2(ERDENIR 3246) WITH SATISFACTORY RESULTS





T Top W Widdlê, E Eng. T Fransyste u Longitudinai B S B one of Stice P P R eng of Piete. S Norber, Standori Hoad Office) 6052-0006-4280-6026 Trace Ragistr, Humberistandul Gebartmert) 90659. Trace Registry Nomber, Eragis, Department) 15747-244 Office Istandori Barbaros Wah Ardig Sox No. 8. Da725 Atagenir ISTANGUL. TURKEY

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MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M600				X00,50	3	PO / BATCH	no.: <i><u>038/3</u></i>	6 5048043
MATERIAL CERT REC'D: QUANTITY RECEIVED: QUANTITY INSPECTED: QUANTITY REJECTED:	10° 20 0	5		. T . §	HICK			
DESCRIPTION	(Ch	CR neck (N)				COMMEN	TS	
SURFACE DAMAGE	Y	IN)						
CORRECT FINISH	(Y)	N						
CORROSION	Y	(N)						
CORRECT GRAIN DIRECTION	(Ý)	N						
CORRECT MATERIAL PER M-DRAWING	(Y)	N	ASTN	B22	Í			
CORRECT THICKNESS	(Y)	N	0 10 / 00					
PHOTO REQUIRED	Y	N						
CORRECT REF # TO LINK CERT	W	N	Hent-7	£ 339	3/			
CORRECT MATERIAL IDENTFICATION	(Y)	N						
CORRECT M# ON THE MATERIAL	(Y)	N		11				
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Υ	8						
DOES THIS REQUIRE AN EXTRUSION REPORT	Υ	(N)						
CUT SAMPLE PIECE	E OF	MA	TERIAL A	ND PREF	ORM	A HARDNE	SS CHECK.	
	F	REC	ORD RES	ULTS BEI	_OW	15 1021		
			HRC	HRB		DUR A	DUR D	WEBSTER
TYPE OF MATERIAL								
SIZE OF TEST SAMPLE								
HARDNESS / DUROMETER READII	NG							
	te	esters	located in	the Quality	Office			

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)
INSPECTED BY:	DAS	SIGNED OFF BY:
DATE:	9-89 MAR 0 4 2018	DATE:

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

REV. B 01.06.08 SHEET 1 OF 09.07.13 DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA
DRAWING NO.
M6061T6B
SHEE DS G O REMOVE GO.A.250/11 OPTION, REFORMAT NOTES, ADD ASTM 821/18221 (ZN D7-1)
NEW ISSUE - 6061-T6 BAR DATE 09.07.13 DS CHECKED
MFG. APPR.
APPROVED DESIGN DRAWN

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SPECIFICATION CONTROL DRAWING

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PURCHASE MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR

SPECIFICATION:

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QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116) OR QQ-A-200/8 OR AMS-QQ-200/8 (OR AMS 4160) OR ASTM B211 OR ASTM B221

PART NUMBER:

M6061T6B T.TTT X WW.WWW

WHERE "T.TTT" = THICKNESS IN INCHES "WW.WWW" = WIDTH IN INCHES WIDTH THICK

U

U

E.G. 1.0" X 12.0" BAR = M6061T6B1.000X12.000

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: <u>M41</u> DATE: M	40 AR (N-1	R0,750		PO / BATCH	NO:039/	56/8048046
MATERIAL CERT REC'D: QUANTITY RECEIVED: QUANTITY INSPECTED: QUANTITY REJECTED:	25			THIC SHE	KNESS ORDEI KNESS RECEI ET SIZE ORDEI ET SIZE RECEI	VED: O. T	
DESCRIPTION	(Ch	CR leck (N)			COMMENT	rs	
SURFACE DAMAGE	Υ	N				1844	
CORRECT FINISH	(4)	N					
CORROSION	Y	(N)					
CORRECT GRAIN DIRECTION	(Y)	N					
CORRECT MATERIAL PER M-DRAWING	(Y)	N	Astm	129			
CORRECT THICKNESS	(Y)	N					
PHOTO REQUIRED	Υ	(1)					
CORRECT REF # TO LINK CERT	P	N	Hest-t	FM525	74		
CORRECT MATERIAL IDENTFICATION	75	N	,		/		4000
CORRECT M# ON THE MATERIAL	(X)	N					
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Υ	0					
DOES THIS REQUIRE AN EXTRUSION REPORT	Υ	N			777-78-3	la la	
		0					
CUT SAMPLE PIECI						SS CHECK.	
				ULTS BELOV		DUBD	TWEDSTED
TYPE OF MATERIAL		_	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL		_					
SIZE OF TEST SAMPLE	NO	<u> </u>					
HARDNESS / DUROMETER READI		<u> </u>					
	<u>te</u>	esters	located in	the Quality Office	<u>:e</u>		

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)
INSPECTED BY:	DAS	SIGNED OFF BY:
DATE: 5	9-89MAR 0 4 2018	DATE:

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

FRACTIONS ± 1/8
ANGLES ± .5*
BURFACE
ROUGHNESS SCALE: NTS SHEET 1 OF 1 APPROVED ¥ ₹ ₹ AISI 4140 / 4142 STEEL BAR | INTIALS AND DATE | INTIALS AND DATE | DISENSING FOR A DESCRIPTOR | DISEN M> ВУ × MF MT-4140-B 18.01.24 17.12.13 DATE 17-790 18-523 ECN# motor ASTM A29, AMS 6349, AMS 6382, AMS 6529, MIL-S-5626, MIL-S-24093 MIN & MAX Rc CHANGED ADD AISI 4142 DESCRIPTION NEW ISSUE EX. 4.0" x 6.0" BAR = MT-4140-B-4.000x6.000 MT-4140-B-T.TTT] x [W.WWW]
WHERE "T.TTT" = THICKNESS IN INCHES
WHERE "W.WWW" = WIDTH IN INCHES SPECIFICATION CONTROL DRAWING REV. 4 в U AISI 4140 / 4142 STEEL BAR MINIMUM ROCKWELL C = 28 Rc MAXIMUM ROCKWELL C = 32 Rc PURCHASE MATERIAL: SPECIFICATION: PART NUMBER:

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MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-3	1/400 IAR 0 4	21-R1.7	50	PO / BATCH	NO.: <u>039/</u>	6/50480
MATERIAL CERT REC'D: QUANTITY RECEIVED: QUANTITY INSPECTED: QUANTITY REJECTED:	105		THIC	CKNESS ORDE CKNESS RECEI ET SIZE ORDE ET SIZE RECEI	VED: 1.73	
DESCRIPTION	NCR (Check Y/N)	(COMMEN.	ΓS	
SURFACE DAMAGE	YN					
CORRECT FINISH	Y					
CORROSION	YO	וו				
CORRECT GRAIN DIRECTION	N N					
CORRECT MATERIAL PER M-DRAWING	(Y) N	1 A3	24			
CORRECT THICKNESS	(Y) N		1			
PHOTO REQUIRED	Y					
CORRECT REF # TO LINK CERT	(V) N	Meat #	¥75069	7/93		
CORRECT MATERIAL IDENTFICATION	(X) N	7, 7, 7	,		0.1000000000000000000000000000000000000	
CORRECT M# ON THE MATERIAL	(Y) N					
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y (N					
DOES THIS REQUIRE AN EXTRUSION REPORT	YA					
CUT SAMPLE PIECE					SS CHECK.	
	REC		ULTS BELO			
		HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL						
SIZE OF TEST SAMPLE						
HARDNESS / DUROMETER READII	VG					
	teste	rs located in	the Quality Offi	ice		

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)
INSPECTED BY:	DAS	SIGNED OFF BY:
DATE:	9-83MAR 0 4 2018	DATE:

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



DESIGN #	DRAWN BY	DART AEROSPAC HAWKESBURY, ONTARIO, CA	
CHECKED	APPROVED	DRAWING NO. M4140H-R	REV. A SHEET 1 OF 1
DATE	05.02.21	THE 4140 ROUND BAR	SCALE 1:1
A	05.02.21	NEW ISSUE	

PURCHASE MATERIAL: AIST 4140 H

ROUND BAR

PER AISI 4140 OR ASTM

A304-

-A193-03-GRADE-B7 /-A29-03 /-A322-91 OR

UNS # - 641400

MINIMUM ULTIMATE TENSILE STRENGTH = 100 Ksi MINIMUM YIELD TENGILE STRENGTH = 66 Ksi

PART NUMBER:

M4140H-R D.DDD

WHERE D. DDD : DIAMETER IN INCHES

EG. 78" ROUND BAR = M4140 H-RO.875



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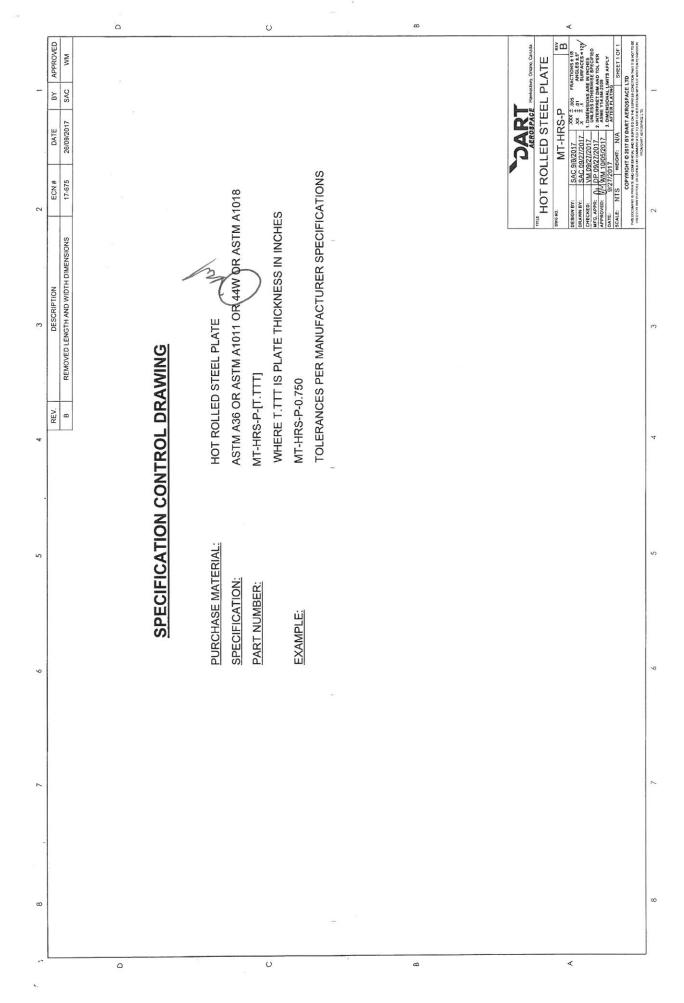
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MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT	AR O	4 20	250		PO / E	BATCH	no.: <i>@39/</i> 3	6/50480
MATERIAL CERT REC'D: QUANTITY RECEIVED: QUANTITY INSPECTED: QUANTITY REJECTED:	7e 31 321	S prz prz		TH SH	ICKNESS	RECEI\ ORDEF	RED:	50
DESCRIPTION		CR eck			COM	MENT	-S	
SURFACE DAMAGE	Υ	N)						
CORRECT FINISH	(Y)	N _o						
CORROSION	Y	(1)						
CORRECT GRAIN DIRECTION	(Y)	N						
CORRECT MATERIAL PER M-DRAWING	(Y)	N	444	V				
CORRECT THICKNESS	(Y)	N						
PHOTO REQUIRED	Y	(N)						
CORRECT REF # TO LINK CERT	\otimes	Ν	Heat	# W76	-550			
CORRECT MATERIAL IDENTFICATION		N						
CORRECT M# ON THE MATERIAL	(Y)	N						
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Υ	B						
DOES THIS REQUIRE AN EXTRUSION REPORT	Υ	N)						
CUT SAMPLE PIECE	E OF	MA	TERIAL A	ND PREFO	RM A HA	RDNE	SS CHECK.	
	F	REC	ORD RES	ULTS BELO	W			
			HRC	HRB	DUI	₹ A	DUR D	WEBSTER
TYPE OF MATERIAL								
SIZE OF TEST SAMPLE								
HARDNESS / DUROMETER READI	NG							
	<u>te</u>	esters	located in	the Quality O	ffice			

QC 18 INSPECTION	will be trained the latest the second	ENGINEERING SIGNOFF (if req	uired)
INSPECTED BY:	DAS	SIGNED OFF BY:	
DATE:	9-89MAR 0 4 2018	DATE:	

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



WK-1407 1++8 SIGNATURE 100655-30-1A Certificate of compliance (Certificat de conformité) NO Mill Test (Tensile Properties of Aluminum) 100655-30-1A1 30 Order No. VENDU #201 LAVAL, QC Order No ACIERS TRANSBEC (1997) LTEE H7L 5R2 NO DE FILIÈRE | NO PIÈCE CLIENT SA00503 NO CLIENT: Hardness (Webster) #1 #2 6061 Alloy 3693 J. Temper Cast No. 33931 TIGE CARREE 1/2" DESCRIPTION ALLIAGE / TREMPAGE 5 YFK 6061/16 Yield (ksi) 39.3 CAST CHEMICHAL COMPOSITION: 98.01 | 0.57 | 0.23 | 0.19 | 0.07 | 0.84 | 0.05 | 0.00 | 0.02 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | MILLTEST + CERT. CONFORMITÉ Ultimate Tensile S 6096mm LONGUEUR 22, BOUL J-F KENNEDY ST-JEROME, QC J7Y 4B6 ACIER OUELLETTE SIGNATURE **BON DE LIVRAISON** Fe CLIENT: NO CLIENT: L-3693-3 Normes: (ANSI H35.1-1997) & (ASTM B221) Cu | Mn | Mg | Cr NATUREL FINITION Total Elongation (%) NB PIÈCES KILOS 186 500 COMMANDE CLIENT Z Zn 500 Test Date.: 23/Sep/16 Hardness (Rockwell E) 92.10 DATE_ VÉRIFICATION DE MATÉRIEL VÉRIFIÉ PAR NB PIÈCES KILOS JIMMY AYOTTE CHAUFFEUR: NO COMMANDE CLIENT: NIR: Ga 100655-30-1A1 Sous-Total: A VENIR R-015478-2 OU-46506 NO DU BON 115350 Conductivity % NB PESÉES NB PIÈCES KILOS NO TICKET 383762 Zr Bi Guillaume Morin REPRÉSENTANT: NO DE TÉLÉPHONE DUCLIENT NO COMMANDE EXTRUDEX Pb **EN LIVRAISON** DATE DE LIVRAISON 190 190 1 450-963-3693 29/Sep/16 Sn Report No. 100655 6163 4 Š

Co

100.0%

%

OK

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40/8

μ44 - 14820 **Test Cert**

Form TC1: Revision 2: Date 23 Apr 2014

Test Certificate

A7H022 4 × A7H056 4 × B7H542 18× B7G046 A7H056 A7H022 A7H022 W7G550 -B7H542 B7H542 E7G046 Heat LAVAL Customer: LES ACIERS TRANSBEC LTEE 4054 BOUL, CORBUSIER #201 PQ H7LSR2 KILLED STEEL, PRODUCED TO A FINE GRAIN ERACTICE MTR EN 10204:2004 INSPECTION CERTIFICATE 3.1 COMPLIANT CTL IN CANADA FROM COIL MADE AND POURED IN U.S.A. MATERIAL MARKED BELOW WITH AN ASTERISK IS PRODUCED FROM COIL OF THIS PRODUCT. MERCURY IS NOT A METALLURGICAL COMPONENT OF THE STEEL AND NO MERCURY WAS INTENTIONALLY ADDED DURING THE MANUFACTURE Heat PRODUCTS PI 3 B7H542 E7G046 Cust Part #: SHIPPED: 0294 0185 0184 0204 0966 0206 0243 1051 Tapscott Road, Toronto, ON MIX 1A1, CA Piece Id 160000 0 Tested Pieces 0203 9966 Min 0.254 (T.L.C) 0.253 (T.L.C) 0.253 (T.L.C) 0.253 (T.L.C) 0.253 (T.L.C) 0.254 (T.L.C) 0.253 (T.L.C) Tested Thickness P S Product Description: CSA G40.21(2013/44W/800W / ASTM A36(14) Size Customer P.O. No.: OU-48320 PCES: PCES: S 0.250 Loc 2, 18, Tot Al OFOFOFOFOFOF (KSI) /x 96.00 LBS: LBS: Sol Al A709(16A)36/ASMESA36(17) (KSI) 227727777778 Tensiles WE HEREBY CERTIFY THAT THIS MATERIAL WAS TESTED IN ACCORDANCE WITH, AND MEETS THE REQUIREMENTS OF, THE APPROPRIATE SPECIFICATION 14706 29412 8170 5 × %RA Elong % Tst 2in 8in Dir Chemical Analysis
Ni Cr ! -08 240.0 06440 (IN) A7H022 W7G550 Mo Hardness 8 Mill Order No.: Abs. Energy(FTLB)
1 2 3 Avg < 0202 1 41-514679-01 Charpy Impact Tests 8 Ship Date: Cert Date: 0000 Daryl Banman Z % Shear 2 3 PCES: 11 Sep 17 11 Sep 17 Shipping Manifest: CHECKED BY 3.14 9 9 Tmp Tst LBS: Cert No: (Page Tst Dir Siz 14706 l of 14706 TT080403 021136814 Tmp BDWTT %Shr CARRA ORGN

Ship Date Customer PO 21-Nov-2017 B38384 aat 75069193 Issued by GERDAU-MONI	Item	d were completed from T PENSILE PSI T PENSILE SURF T HEALTCAINING T REDUCTION T REDUCTION T REDUCTION T REMEDITA T TIME AT TEMP F T AUSTRES FREE T TIME AT TEMP T QUENCH MEDIA STRESS FREE STRESS FREE T STRESS FREE		Item Description Value V	Value 141000 123300 21.00 61.0 297.0 Value 500 - 2500 1600 - 1700 0 - 20 Report PANYO CERTIFIED CONFORMS Value USA
Islated below were produced using steel from Heat 75069193 Issued by GERDAU-MONRR	DNROE and Units PMGT PMGT PMGT PMGT PMGT PMGT PMGT PMGT	d were completed from Mechanical TEMSILE PSI TEMSILE PSI TEMSILE PSI TO YIELD PSI ELONGATION TO REDUCTION TO REDUCTION TO REDUCTION TO REDUCTION TO REDUCTION TO RESURE TEMP FOR TEMPE FOR THE STEES FREE TO TEMPE AT TEMPE FOR TEMPE FOR THE STEES FREE TO MINIPROSESSING TO MINIPROSESSING TO MINIPROSESSING TO MINIPROSESSING TO MINIPROSESSING TO MASAN SENIOR REDUCTION AS RAJA JOBA BC C STUCIUME C STUCIUME C Tag Number C Tag Number C C Tag Number C C Tag Number C C Tag Number C C C Tag Number C C C C C C C C C C C C C C C C C C C		psi Units si Units n Area n Area n Area in Pahrenheit rahrenheit in Pahrenheit in Pahr	
Solution Description Description	DURIS PAGT PAGT PAGT PAGT PAGT PAGT PAGT PAGT	Were completed from Wechanical TENSILE PSI TENSILE PSI TENSILE PSI TENDUCTION BRINELI SURF HOADITAN F TEMPER TEMP F TEMPER TEMPER TEMPER TEMPER TEMPER TEMPER TEMPER TEMPER TEMPER TEMPER	Fahre pin mempion in pg in nempion in pg in pg in nempion in nempion in nempion in pg in nempion in	PSI Units SI Units SI Units Fahrenheit I Fahrenheit In Fah	Value 141000 123300 21.00 61.0 297.0 Value 500 - 2500 1600 - 1700 0 - 20 REPORTE PEM/O CONFORMS Value USA 28.30 Value CONFORMS CONFORMS CONFORMS CONFORMS TM Length 30.00.00 141000 17000 141000 170000 17000000 170000000000
Value Value Value Value Value Carbon 0.40000 0.40000 0.86000 Phosphorus 0.01300 0.021000 Silicon 0.24000 0.24000 0.19000 Value 0.24000 0.19000 0.1	Units PWGT Mechanical TENSILE PSI TENSILE PSI TILID PSI TELOMATION TREDUCTION REDUCTION TREMBER TEMP F TO AUSTRES TEMP F TO AUSTRES FREE THAGNETISM-HT TIME AT TEMP TOURNCH MEDIA STRESS FREE HT4140-424T MIN PROCESSING MELT COUNTRY RED RATIO ASTM Standard AL193/193M-01 ASTM STANDARD ASTM STANDARD RED RATIO	Pahre p in per print per p	psi Units Si Units Si Units renheit Fahrenheit in Fahrenheit	Value 141000 123300 21.00 61.0 61.0 297.0 Value 500 - 2500 1600 - 1700 500 - 2500 0 - 20 Report PEM/O CERTIFIED CONFORMS Value USA USA USA USA USA USA USA US	
Carbon 0.400			Tensile Strength in Expension in Experiment Elongation Percent Elongation in Experiment Elongation in Farinell Surface Description Temper Temp in Fahre Austenitize Temp in Gauss Time at Temperature Quench Media Requirt Cart stress free Quench & Temper Description Majnetiam in Country Melted in Country Rolled in Country Rolled in Country Rolled ST Temper Description Reported Microstruct Percent Tempered May Reported Microstruct Reported Microstruct	SI Units SI Units SI Units In Area Pahrenheit In Fahrenheit	141000 112300 21.00 61.0 61.0 297.0 Value 500 - 2500 1600 - 1700 500 - 20 0 - 20 CORPITIED CONFORMS Value USA
Manganese 0.860 Phosphorus 0.033 Sulfur 0.240 Silicon 0.240 Mickel 0.190 Mckel 0.190 Chromium 0.190 Chambium 0.020 Vanadium 0.020 Vanadium 0.020 Vanadium 0.020 Vanadium 0.003 Columbium 0.003 Columbium 0.003 Columbium 0.003 Clament Sum Limit 5.20 Clament Sum Limit 5.20 Clament Sum Limit 5.20 Description 0.003 Clament Sum Limit 5.20 Description 0.000 Description 0.000 Description 0.000 Diameter Valu 0.034 Description 0.000 Description 0.000 Clament Sum Limit 5.20 Columbium 0.000 Columbium			Yield Strength in RS Percent Elongation Percent Elongation in Percent Reduction in Percent Reduction in Brinell Surface Description Tempar Temp in Rahre Austenitize Temp in Gauss Time at Temperature Quench Media Require Cert stress free Quench & Temper Description Melted in Country Reduction Ratio Description Reduction Ratio Description Reduction Ratio Description Resported Microstruct Reported Microstruct Reported Microstruct	n Area n Area n Area renheit rements rements rements rements rements and Yield properties rements	123300 21.00 61.0 61.0 297.0 Value 500 - 2500 1600 - 1700 500 - 2500 0 - 20 Report PEM/O CERTIFIED CONFORMS Value USA USA USA USA 28.30 Value CONFORMS Value CONFORMS Value TM Length Sales 24ft2in
Phosphorus 0.013 Sulfur 0.020 Sulfur 0.240 Silicon 0.190 Mickel 0.190 Mickel 0.190 Chromium 0.190 Chromium 0.190 Molybdenum 0.160 Aluminum 0.020 Columbium 0.020 Vanadium			Percent Elongation Percent Reduction in Percent Reduction in Brinell Surface Description Tempar Temp in Fahre Austenitize Temp in Gause Time at Temperature Quench Media Require Cert stress free Quench & Temper Description Melted in Country Reduction Ratio Description Ratio Description Grade B7 ASTMA BC Tensile and Description Percent Tempered Mar	n Area enheit Fahrenheit in Fahrenheit ements ements ture Fury Units Same	21.00 61.0 297.0 Value 500 - 2500 1600 - 1700 500 - 2500 0 - 20 Report PEM/O CERTIFIED CONFORMS Value USA USA 28.30 Value CONFORMS CONFORMS CONFORMS TM Length 30.00.00.00.00.00.00.00.00.00.00.00.00.0
Sulfur 0.021 Sulfur 0.021 Sulfur Silicon Silicon O.021 Sulfur O.021 O.020 O.02			Percent Reduction in Percipilon Descripion Temper Temp in Fahre Austenitize Temp in Gause Time at Temperature Quench Media Require Cert stress free Quench & Temper Descripion Melted in Country Reduction Ratio Descripion Descripion Descripion Grade B7 ASTMA BC Tensile and Descripion Percent Tempered Ma Reported Microstruct	enheit Fahrenheit in Fahrenheit in Fehrenheit turensite Fure Fure Fure Jayo Units Comments	297.0 Value 500 - 2500 1600 - 1700 500 - 2500 0 - 20 REPORT PEM/O CONFORMS Value USA 28.30 Value CONFORMS CONFORMS TM Length 3000 Vaffelin 80 - 100 TM Length 3000 Value 80 - 100 TM
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The first the life of the steel washes and head number supplies and the steel country and the steel of the st	part number, p	product description and quanti	h. Material produced in accordance		DM-00002 Rev 0 dated 1
the back coats to be in conformance and a frue copy of data represented in company records.	company rec		Y	ce with Eaton Steel's Quality Ma	11000 WILL 00000
Created on 21-Nov-2017 This discussed was prepared by means of electronic	ctronic		This steel was not subject to weld repair or expos	ordance with Eaton Steel's Quality Manual QM-00002 Rev 0 dated 11 exposed to mercury while in the possession of Eaton Steel	possession of Eaton Stee

GERDAU SPECIAL STBEL NORTH AMERICA 5591 MORRILL ROAD JACKSON, MICHIGAN 49201

Gerdan Monroe 1900 East Bront Street Monroe, MI 48184 164576 REDUCTION RATIO DI CALCULATION HARDENABILITY GRAIN SIZE SPECIFICATION 10902 REVISION 6, 12/12/13, A304-16; A322-13 RATIO= 28.3 TO 4140 THEORETICAL
J1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 18 20 22 24 26 28 30 32 34 56 56 56 56 56 55 54 53 51 50 49 48 47 46 45 44 43 43 41 41 39 39 37 0.40 PATRICE GRAFTON
EATON STEEL CORPORATION
10221 CAPTAL OAK PARK , MI 48237 0.003 < a 0.86 0.003 5.22 N Shat these data are dorrect and in compilants with specified requirements. Mn 0.013 0.021 0.24 1.0 SPECIFICATION ITEM 10902 SPECIFICATION ASTM A255/A304 ч SPECIFICATION CAT 1E0024 SPECIFICATION ASTM E112 10902/4140/42MM Ø CERTIFIED MATERIAL TEST REPORT CHEMICAL ANALYSIS S ORDERED 0.19 Z. RND 0.98 OAK PARK , MI 48237 EATON STEEL CORPORATION C/O APOLLO HEAT TREAT 10400 CAPITAL STREET 75069193 3: 210mm Billet Ç FINE GRAIN 5-8 0.16 Mo SHIP TO 314676 101 0.22 G 2" 0.009 Sn 10/19/17 0.020 Al

CONTINUED ON PAGE 2

rance Representative

Patrick Doyle

GERDAU SPECIAL STEEL NORTH AMERICA 5591 MORRILL ROAD JACKSON, MICHIGAN 49201

MELTED/ROLLED @ GERDAU MONROE; MEETS SAE J422 S5/05 RATING
(WORST FIELD); ASTM E381 MACRO BTCH SATISFACTORY: S1/R1/C1; ASTM A29/A29M-16
** MATERIAL 100% MELTED AND MANUFACTURED IN THE U.S.A. BY THE ELECTRIC
ARC FURNACE AND CONTINUOUS CASTING METHOD. THE PRODUCT HAS NOT
BEEN REPAIRED BY MELDING AND THIS MATERIAL HAS NOT BEEN EXPOSED
TO MERCURY OR TO ANY OTHER METAL ALLOY THAT IS LIQUID AT AMBIENT
TEMPERATURES DURING PROCESSING OR WHILE IN OUR POSSESSION.
GERDAU MONITORS ALL INCOMING SCRAP AND ALL HEATS OF STEEL TO ENSURE THAT
PRODUCTS SHIPPED ARE FREE OF RADIOACTIVE MATERIAL. 164576 RESIDUAL MIN RESIDUAL MAX P+S = 0.0340 P+S = 0.0340SPECIFICATION 10902 REVISION 6, 12/12/13, A304-16; A322-13 OAK PARK , MI 48237 PATRICE GRAFTON
EATON STEEL CORPORATION
10221 CAPTAL SPECIFICATION ITEM 10902 SPECIFICATION ITEM 10902 10902/4140/42MM CERTIFIED MATERIAL TEST REPORT BERR ORDERED RND EATON STEEL CORPORATION C/O APOLLO HEAT TREAT 10400 CAPITAL STREET OAK PARK , MI 48237 75069193 210mm Billet 04 4188 314676 101 10/19/17

We certify that these dath are correct and in compliance with specified requirements.

Patrick Doyle

3000 East Bront Street Monroe, Wi 48360

PAGE 2 OF 2



Bill To: Apollo Heat Treating and Processing Company, L.L.C 10400 Capital Avenue

Randy Call Oak Park, MI

Attn:

rcall@apollohtp.com

Ship To: Apollo Heat Treating and Processing Company, L.L.C

10221 Capital Avenue Oak Park Mi 48237 (248)543-3578 telephone (248)398-1434 facsimle

10400 Capital Avenue

Report Date: 11/6/2017 Oak Park, MI

Report ID:

Request ID: 17-4353

Work Order 8 826531 Shape Round

Test Comments
 Sample ID
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 Resouction of Priority Burnace

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 61
 297
 Report Approved By: Steve Avery

Store Brown

Mechanical Testing

ASTM E8M-168

ASTM E10-17

Mechanicals tested at Midradius



10400 Capital Avenue •Osk Park, Michigan 48237 • (248) 398-3434

CERTIFICATION OF HEAT TREATMENT

Heat Treat Job Number: 3088 Certification Number: 17 - 0803 Customers Order Number: 826531 Part Number: 10902 - 11132 Heat Number: 75069193

Date: 11 / 14 / 2017

Quantity: 324 Pcs.
Weight: 64,388 Lbs.
Description: 1.7500" Diameter x 24' 3" Length
Per Specification: ESHT HT4140 - 42QT

Material: 4140

	Temperature	Time at Heat	Coolant
Normalized	N/A		
Preheat	N/A		
Austenitized/Hardened	1550°F	45 Minutes	
Spray Quenched	103.0 °F - 104.9 °F	N/A	Water
Temper	1220 °F	1 Hour 15 Minutes	Air Cooled to Ambient
Temper	N/A		

contained in the records of Apollo Heat Treating and Processing, LLC. We hereby certify the above material has been treated in the manner described are correct as Method of heat treat monitor, set point thermocouple (Type K). Equipment calibrated per AMS2750E.

Randy L. Cáll

Plant Manager
Apollo Heat Treating & Processing, LLC

Y Value Y USA Y USA Y USA Y USA Y USA ONFORMS CONFORMS CONFORMS CONFORMS CONFORMS CONFORMS CONFORMS CONFORMS CONFORMS Value Value To 100 Tructure TM Langth Langth 3990 LBS 20ft 20ft Telephone Steel. The fore one of Eaton Steel.	ITO Reduction Ratio Indial Obscription 3M-0.1 Obscription Oracle B7 Obscription TM Percent Tempered Martensit RUCTURB Reported Microstructure ther Ohy U 1335 399 L 1335 399 L 1336 399 L 1337 399 L 1338 399 L 1338 399 L 1338 399 L 1339 L 1339 L 1339 L 1330 L 1330 L 1331 L 1332 L 1333 L 1333 L 1334 L 1335 L 1335 L 1335 L 1335 L 1336 L 1337 L 1338 L 1339 L 1330 L 1331 L 1332 L 1333 L 1333 L 1334 L 1335 L 1	A434-90a-BC Structure PERCENT TW MICROSTRUCTURE Tag Number 022-2171335	HRC	umber where applicable, pa	e, heat, purchase order n	Bundle tags with Eaton Steel identifiers relevance the steel grade, heat, purchase order number where applicable, part number, product description and quantity. Material produced in acco	Bundle tags with Ea
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COUNTRY CONFORMS CONFORMS CONFORMS Value CONFORMS Value CONFORMS Value CONFORMS Value CONFORMS C			HRC	57	and	4/16 inch from Quenched End	J4
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in PSI Unite	Yield Strength	YIRLD PSI	PWGT	0.85000		Manganese	M
in PSI Unite	Tensile Strength	TENSILE PSI	PWGT	0.41000		Carbon	C
Value	Description	Mechanical =	to Units	Value ***		Outripios - A Land	Chanistry
808632.	m Eaton Steel Job 800	ere completed fro	ROE and w	ed by GERDAU-MONE	m Heat M52574 issu	All broadles listed below were produced using steel from Heat M5574 issued by GERDAU-MONROE and were completed from Eaton Steel Job 808632.	Il bundles listed
3/4 HR RD 4140/42MM 20ft2in SBQ QTSF FG MST	9/16-R40C	v 003	11144 rev 003	B39362	52 09-Jan-2018	223252	
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	C	CERTIFIED MATERIAL TEGT REPORT	TERIAL TE	GT REPOR	3			
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OF PROPER				Danieli	MIL CAST			
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10221 CAPITAL		0		10 CROSSCREEK TRAIL	SCREEK	10 CROSSCREEK TRAIL		
OAK PARK , MI 4	MI 48237	Z		PELHAM ,	AL	35124		
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PAGE 1								
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DOOD TOUT OF CHAPT	these data are	correct	and in co	mpliance	Const.	in compliance with specified requirements. White Compliance with specified requirements.	require	quirements.

GERDAU SPECIAL STEEL NORTH AMERICA 5591 MORRILL ROAD JACKSON, MICHIGAN 49201

142324 DAN MCNAUGHTON
EATON STEEL CORPORATION OAK PARK , MI 48237 10221 CAPITAL 1012462/4140EFVD CERTIFIED MATERIAL TEST REPORT EATON STEEL CORPORATION & VULCAN HEAT TREATING 10 CROSSCREEK TRAIL PELHAM , AL 35124 M52574 28
Danieli Cast OL AINE 283416 102 11/05/13

4140 BUNNE ORDERED RND 20' 2"

ASTM E381 MACRO ETCH SATISFACTORY: S1/R1/C1; MEETS SAE J422

\$5/05 RATING (WORST FIELD);

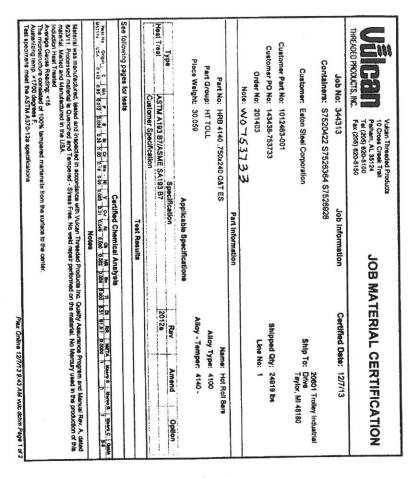
\$5/05 RATING (WORST FIELD);

** MATERIAL 100% MELTED AND MANUFACTURED IN THE U.S.A. BY THE BLECTRIC ARC FURNACE AND CONTINUOUS CASTING METHOD. THE PRODUCT HAS NOT BEEN REPAIRED BY WELDING AND THIS MATERIAL HAS NOT BEEN EXPOSED TO MERCURY OR TO ANY OTHER METAL ALLOY THAT IS LIQUID AT AMBIENT TEMPERATURES DURING PROCESSING OR WHILE IN OUR POSSESSION.

GERDAU MONITORS ALL INCOMING SCRAP AND ALL HEATS OF STEEL TO ENSURE THAT PRODUCTS SHIPPED ARE FREE OF RADIOACTIVE MATERIAL. RESIDUAL MIN RESIDUAL MAX Gerdau Monros P+S = 0.0320P+S = 0.0320ITEM 1012462 REV 1 DTD 03/05/12; A29/A29M-12; A322-07 PAGE 2 OF 2 We certify that these data are correct SPECIFICATION ITEM 1012462 SPECIFICATION ITEM 1012462 CUSTOKER SPECIFICATIONS and in compliance with specified requirements.

Monroe, MI 48161 3000 East Front Street

Wendy J. Craig



cert 377068

Date	BOT	Chmielanski, David - Supervisor	Chmielanski						
12/7/13	io	Mindel	Dane 1						
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1000	86	8	8	. 8	40	17.6	126,000	142,500	Quench & Temper Physicals Results
<u>\$</u>	Ceeter Hardness (HRC)	Surface Hardness (HRC)	Midredius Hardness (HRC)	30	Elongation Gage : ROA Length (%)	Elongation (%)	Yield 0.2% Officet (pai)	t: Quench Tenelle (pel)	Teet No. 26780 Teet: Quench & Temper Physicals (Lbs) Description Terests Yield 0.7% Etongsts (%) Officet (pai) (%)
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TION	JOB MATERIAL CERTIFICATION	RIAL CI	OB MATE	ر	•	adad Product bek Trall 35124 0-5100 (0-5150	Vuican Threaded Products 10 Cross Creek Trail Petham, AL 35124 Tel (205) 620-5100 Fax (205) 620-5150	es, inc.	THREADED PRODUCTS, INC.

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